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ABSTRACT

Adaptive competencies are the skills required to effectively complete a particular task and are the congruencies (balance) between personal skills and task demands. The differences between the adaptive competency acquisition of students in licensed practical nurse (LPN) programs and associate degree nurse (ADN) programs were examined in a quasiexperimental study. A 34-item profile and a 3-question demographic assessment were administered to 30 students enrolled in the final quarter of an LPN program and 41 students enrolled in the beginning quarter of an ADN program. Individual scores and group means for the individual Likert-type scale responses were determined. No significant differences were found in how the students enrolled in the LPN program and students enrolled in the ADN program developed the following types of competencies: (1) accommodative competencies; (2) assimilative competencies; (3) convergent competencies; and (4) divergent competencies. Gender, age, and previous health care experiences did not appear to factor into acquisition of adaptive competencies. The study supported the articulation concept by providing data establishing that articulating programs is a viable option in nursing education. The study was said to support the new approaches being advocated by nurse educators, which places value on the variety of educational backgrounds that foster development of competency types, both conceptual and practical, that enable graduates to function effectively in changing work environments and situations. (Contains 14 references.) (MN)

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# *Adaptive Competency Acquisition: Why LPN-to-ADN Career Mobility Education Programs Work*

A Conference Presentation

for

**The Association of Career and Technical Education**

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By

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## Introduction

Career mobility education, a hallmark of career and technical education, is imperative to the viability of the nursing profession (Bowles, Lowry, & Turkeltaub, 1985). Career mobility educational programs allow adult nursing students who have attained one level of education, or competency, to apply previous learning in a new and different way to achieve different levels of education or competency (Ellis & Hartley, 1995; Harrington, Smith, & Spratt, 1996).

The key to career mobility in nursing is educational programs that articulate in a manner that allows clear entry into the nursing education system at defined levels. Articulation is a means of educational mobility that has had a history of success (Menacker, 1975; Bowles, Lowry, & Turkeltaub, 1985; Kintzer & Wattenberger, 1985; Rapson, 1985). Articulation allows two or more nursing programs the ability to cooperate and accommodate career needs and learning goals. Articulation allows for alternative approaches to achieve registered nurse (RN) status. Articulation enhances career opportunities for a broad sector of people from many socioeconomic backgrounds, while encouraging the use of nursing resources in an effective manner (Bowles, et al., 1985).

Nursing, as a profession, has long supported the concept of career advancement. For years, a large number of nurses have advanced in the profession, assisted by the various nursing educational systems (Bowles, et. al, 1985). Career mobility gained further impetus in nursing during the 1980s because of the recognized need for a professional level of nurse preparation and the presence of various types of educational milieu (Rapson, 1985). Although the concept of educational mobility for nurses has been supported intellectually by society and by various professional groups, the creation of licensed practical nurse (LPN) to RN educational programs has been slow.

An articulated career mobility educational continuum forms the basic belief system of professional nursing education programs. Through program terminal goals and objectives, nursing educational environments attempt to, directly, develop learning competencies and, indirectly, form adaptive competencies. It is these types of learning competencies that must be achieved regardless of the type of program articulation or level of nursing education. The success of each level can be measured by adaptive competency acquisition, competencies that are a side effect of strict program guidelines. The structure of a career mobility process purports an easy transition from licensed practical nurse graduate candidates to second level associate degree in nursing student (Duncan, 1996). This progression is consistent with the philosophical structure of the School-To-Work career and technical education approach

The challenges to nursing education are focused on maintaining standards of excellence within the programs and protecting the educational integrity of each degree or level while facilitating the progression of students as they seek advancement in the profession of nursing [National League for Nursing (NLN), 1996]. This articulated process enhances the educational mobility of nurses, while maintaining program standards and outcomes.

The development of articulation models has enhanced the ability of nursing education to provide qualified professional nurses to meet the needs of society and of the profession. Qualified professionals should be able to meet the competencies needed to practice through participation in and graduation from these programs. It is articulated competencies that should be a focus of any nursing educational outcome. Adaptive competencies must be achieved

regardless of the type of program articulation or level of nursing education. The level of competency is dependent in the level/type of nursing education program. The success of each level can be measured by competency acquisition.

## Conceptual Framework

Kolb's theory of Experiential Learning Theory (ELT) (1976) formed the basic tenet of the conceptual framework for this study. This model was chosen because of its applicability to the field of nursing and usefulness in determining competency acquisition (Laschinger, 1992).

Adaptive competencies are the skills required to effectively complete a particular task and are the congruencies (balance) between personal skills and task demands (Kolb, 1984; Ridley, et al., 1995). Adaptive competency skills are of particular interest to nursing due to task orientation (Kolb; Laschinger, 1992). Adaptive competencies form the basis of nursing care and developed based on the level/type of nursing education program (Laschinger, 1992).

## Purpose

The purpose of this quasi-experimental study was to examine the differences in adaptive competency acquisition between LPN graduate candidates and second level ADN students. The demographic variables of gender, age, and previous health care experience were assessed in the study design and data collection.

## Methodologies

Non-probability sampling was the modality for this study. The sample consisted of 30 LPN nursing students who were enrolled in the final quarter of an LPN nursing program and 41 second level ADN students enrolled in the beginning quarter of an ADN nursing program. This type of sampling, where all available subjects are asked to participate, has been commonly utilized in nursing studies (Polit & Hungler, 1991).

Participants from both programs completed the ACP, a 34-item profile and a three question demographic assessment as the research tool. The results provided both individual scores and group means from the individual Likert-type scale responses, which ranged from one (unskilled) to seven (highly skilled). Thus, the scores were considered a ratio scale. For statistical purposes, the ACP subscales' means were compared to determine adaptive competency acquisition. Since this research study involved two community colleges, the t test for independent samples was utilized in this research (Polit & Hungler, 1991). Additionally, a three-way ANOVA was completed in the analysis of age levels in relationship to the ACP. The age level categories consisted of 18 to 29 years, 30 to 39 years and over 40 years.

Initial scores for the ACP were determined using the formula established by Kolb (1984). Tabulating the responses in each subscale and then dividing this sum by five, computed scores for each subscale on the 34-item APC profile. Items 4,5,16,18, and 22, corresponded to the accommodative competency subscale. Items 3,7,11,20, and 23 corresponded to the assimilative subscale. Items 6,10,13,27, and 32 corresponded to the convergent subscale. Items 1,8,14,17, and 21 corresponded to the divergent subscale. This process placed the resulting means back into a Likert-type scale range of one to seven, with one being unskilled, four being average, and seven being highly skilled. Overall Adaptive Competency means scores were determined for each group examined, using a t test analysis.

## Results

The overall results of the t test of the *accommodative* subscale indicated that there was no significant difference between the two programs (**A & B**), with a t value of t (69)=. 229, p < .05. The t test comparison of the mean scores indicated no significant difference between the *two* Program **A** groups, t (39)=-.239, p < .05 and the *two* Program **B** groups, t (27)=-1.117, p < .05. These comparisons indicated that students developed accommodative competencies, which focus on the ability to commit to objectives, influence and lead others, deal with people, seek opportunities, and be personally involved, in a manner that was not statistically significant. Regardless of community college or program, students developed the accommodative adaptive competency at a comparable level.

The overall results of the t test of *assimilative* subscale indicated that there was no significant difference between the two programs (**A & B**), with a t value of t (69)=. 300, p < .05. There was no significant difference between the assimilative mean scores of Program **A** ADN students (4.88) and the mean of the Program **A** LPN graduates (4.85), t (39)=. 171 p < .05. There was also no significant difference between the assimilative mean scores of Program **B** ADN students (4.80) and Program **B** LPN graduates (4.80) as measured by the ACP, t (27)=. 000, p < .05. Students developed assimilative competencies, which center on building conceptual models, designing experiments, organizing information, analyzing quantitative data and testing theories, in a similar manner. Regardless of program, students developed the assimilative adaptive competency at a comparable level.

The overall results of the t test of *convergent* subscale indicated that there was no significant difference between the two programs (**A & B**), with a value of t (69)=. 376, p < .05. There was no significant difference between the convergent mean score of Program **A** ADN students (5.57) and the mean score of the LPN graduates (5.36), t (39)=. 957, p < .05. The convergent ACP mean for Program **B** ADN students was 5.51, while the mean of LPN graduates was 5.35. The t test indicated no significant difference between the two groups, t (27)=. 554, p < .05. Students developed convergent competencies, which center on the ability to make decisions, generate alternate ways of thinking, experiment, choose the best solution and set goals, in a manner that was not statistically significant. Regardless of the program, students developed the convergent adaptive competency at a comparable level.

Lastly, the overall results of the t test of *divergent* subscale indicated that there was no significant difference between the two programs (**A&B**), with a t value of t (69)=-. 44, p < .05. There was no significant difference between the divergent mean scores of Program **A** ADN students and LPN graduates, t (39)=. 081, p < .05 and Program **B** ADN students and LPN graduates, t (27)=-.557, p < .05. Students in both community college settings and programs developed the divergent competency, which focus on the ability to listen with an open mind, be sensitive to values and feelings, and imagining the implications of situations, in a manner that was not statistically significant. Regardless of program, students developed the divergent adaptive competency at a comparable level.

## Conclusions

The study found that ADN students and LPN graduate candidates developed the adaptive competencies at a comparable level. Similar developmental progression is consistent with the philosophical structure of the School-To-Work educational approach. Additionally, both ADN and LPN nursing programs, as well as both community colleges, were providing adaptive competency development at a comparable rate.

Gender, age, and previous health care experience did not appear to be a factor in acquisition of adaptive competencies. There appeared to be limited age, gender, or health care experience barriers for LPN to ADN transition, allowing for assimilation into nursing programs, in the area of adaptive competency acquisition.

## Recommendations and Implications

This study supports the articulation concept by providing data that established the articulating programs is a viable option in nursing education. Statistically, adaptive competencies were similar for both ADN and LPN programs. As Rapson, Bowles, et al. (1985), and Menacker (1975) discovered, articulation was a means of educational mobility that has had a history of success. This study placed value on the concept that articulation between two nursing programs has the ability to be successful. Similar levels of adaptive competency acquisition allow programs the ability to cooperate and accommodate career needs and learning goals. The articulation process, which allows for alternative approaches to achieve RN completion, was confirmed by the findings of this study.

The development of articulation models has improved the ability of nursing education to provide qualified professional nurses to meet the needs of society and of the profession. Qualified professionals would be able to meet the adaptive competencies needed to practice through participation in and graduation from these programs. This study underscored the achievement of these competencies through participation in a formal nursing program.

Nurse educators advocate new approaches to preparing students to function effectively in the changing environment of today's health care. This assumption places value on the variety of educational backgrounds that foster the development of competency types, both conceptual and practical, that enable graduates to function effectively in the changing work environments and situations. Whereas, traditional nursing curricula emphasize the mastery of tasks necessary for basic patient care, the current nursing educational focus is to foster a best practice approach. Current approaches to nursing education require the use of both conceptual and behavioral learning competencies, as discussed by Meleis & Jennings (1989). The outcomes of this study support their view by providing additional data and insight into adaptive competence acquisition, thus allowing for "best practice" in the nursing profession.

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